IN THE CLAIMS

What is claimed is:

1. A article of manufacture including one or more machine-accessible medium having executable code stored thereon which, when executed by a machine, causes the machine to:

receive one or more semaphore modification requests from one or more requesting devices;

identify an ownership state of a semaphore corresponding to the one or more semaphore modification requests;

arbitrate to identify a first modification request of the one or more semaphore modification requests, the first modification request from a first requesting device;

allow the first modification request to succeed if the identified ownership state corresponds to the first requesting device; and

allow the first modification request to succeed if the identified ownership state corresponds to no ownership.

2. The article of manufacture recited in Claim 1 which, when executed by a machine, further causes the machine to

decline a second modification request of the one or more semaphore modification requests.

3. The article of manufacture recited in Claim 1 which, when executed by a machine, further causes the machine to:

receive a semaphore read requests from one of the one or more

requesting devices;

transmit the identified ownership state in response to the semaphore read request; and

allow the first requesting device to access a shared resource.

4. The article of manufacture recited in Claim 1 wherein the semaphore is stored in a multiprocessor comprising the one or more requesting devices.

5. The article of manufacture recited in Claim 4 wherein the multiprocessor comprising the one or more requesting devices is integrated on a single die.

6. The article of manufacture recited in Claim 1 wherein arbitration is resolved on a round-robin basis.

7. The article of manufacture recited in Claim 1 wherein arbitration is resolved on a priority basis.

8. A method comprising:

receiving one or more semaphore modification requests from one or more requesting devices;

identifying an ownership state of a semaphore corresponding to the one or more semaphore modification requests;

arbitrating to identify a first modification request of the one or more semaphore modification requests, the first modification request from a first requesting device;

allowing the first modification request to succeed if the identified

ownership state corresponds to the first requesting device; and

allowing the first modification request to succeed if the identified ownership state corresponds to no ownership

9. The method recited in Claim 8 further comprising

declining a second modification request of the one or more semaphore modification requests.

10. The method recited in Claim 8 further comprising:

receiving a semaphore read requests from one of the one or more requesting devices;

transmitting the identified ownership state in response to the semaphore read request; and

allowing the first requesting device to access a shared resource.

11. The method recited in Claim 8 wherein each of the one or more semaphore modification requests received identify a corresponding requesting device of the one or more requesting devices.

12. The method recited in Claim 8 wherein arbitration is resolved on a round-robin basis.

13. The method recited in Claim 8 wherein arbitration is resolved on a priority basis.

14. A multiprocessor system comprising:

means for receiving one or more semaphore modification requests from one or more requesting devices;

means for identifying an ownership state of a semaphore corresponding to the one or more semaphore modification requests;

means for arbitrating to identify a first modification request of the one or more semaphore modification requests, the first modification request from a first requesting device;

means for granting the first modification request if the identified ownership state corresponds to the first requesting device; and

means for granting the first modification request if the identified ownership state corresponds to no owner.

15. The multiprocessor system recited in Claim 14 further comprising:

means for receiving a semaphore read requests from one of the one or more requesting devices;

means for transmitting the identified ownership state in response to the semaphore read request; and

means for allowing the first requesting device to access a shared resource.

16. The multiprocessor system recited in Claim 14 wherein the one or more requesting devices are fabricated on a single die.

17. A multiprocessor comprising:

a logical plurality of processors;

a resource scheduling device coupled to one or more of the logical plurality of processors to provide access to a set of resources;

a shared resource of the set of resources having a semaphore;

a semaphore checker coupled to the resource scheduling device and to the semaphore to:

receive one or more semaphore modification requests from the one or more of the logical plurality of processors,

identify an ownership state of the semaphore,

arbitrate the one or more semaphore modification requests and identify a first modification request from a first requesting processor of the one or more of the logical plurality of processors,

allow the first modification request to succeed if the identified ownership state corresponds to the first requesting processor; and

allow the first modification request to succeed if the identified ownership state corresponds to no ownership.

18. The multiprocessor recited in Claim 17 wherein the semaphore checker is further to:

decline a second modification request of the one or more semaphore modification requests.

19. The multiprocessor recited in Claim 17 wherein the semaphore checker is further to:

receive a semaphore read requests from one of the one or more of the logical plurality of processors;

transmit the identified ownership state in response to the semaphore read

request; and

allow the first requesting processor to access a shared resource.

20. The multiprocessor recited in Claim 17 wherein each of the one or more semaphore modification requests received identify a corresponding requesting processor of the one or more of the logical plurality of processors.

21. The multiprocessor recited in Claim 17 wherein the multiprocessor is fabricated on a single die.

22. The multiprocessor recited in Claim 17 wherein arbitration is resolved on a round-robin basis.

23. The multiprocessor recited in Claim 17 wherein arbitration is resolved on a priority basis.

24. An apparatus comprising:

a register to access a shared resource of a set of resources;

a semaphore corresponding to the shared resource; and

a semaphore checker coupled to the semaphore to allow access to the shared resource through the register.

25. The apparatus of Claim 24 wherein the semaphore checker is further to:

receive one or more semaphore modification requests from one or more of a logical plurality of processing devices,

identify an ownership state of the semaphore,

arbitrate the one or more semaphore modification requests and identify a first modification request from a first requesting device of the one or more of the logical plurality of processing devices,

allow the first modification request to succeed if the identified ownership state corresponds to the first requesting device; and

allow the first modification request to succeed if the identified ownership state corresponds to no ownership.

26. The apparatus of Claim 25 wherein the semaphore checker is further to:

decline a second modification request of the one or more semaphore modification requests.

27. The apparatus of Claim 25 wherein the semaphore checker is further to:

receive a semaphore read requests from one of the one or more of the logical plurality of processors;

transmit the identified ownership state in response to the semaphore read request; and

allow the first requesting processor to access a shared resource.

28. The apparatus of Claim 25 wherein each of the one or more semaphore modification requests received identify a corresponding requesting device of the one or more of the logical plurality of processing devices.

29. The apparatus of Claim 25 wherein the logical plurality of processing devices are integrated on a single die.

30. The apparatus of Claim 25 wherein arbitration is resolved on a round-robin basis.